



A.D. 1865, 21st August. N° 2155.

Machinery for Manufacturing Telegraph Cables.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by Fleeming Jenkin at the Office of the Commissioners of Patents, with his Petition, on the 21st August 1865.

I, FLEEMING JENKIN, of Duke Street, Adelphi, in the County of Middlesex,
5 do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN MACHINERY TO BE USED IN THE MANUFACTURE OF TELEGRAPH CABLES,**" to be as follows :—

My Invention has for its object improvements in machinery to be used in the manufacture of telegraph cables. I subject the cables as manufactured,
10 and before or while being finally coiled away on board ship, to a maximum or proof strain. By this means weak places may be discovered in the strengthening covering of the cables, latent flaws in the insulating material may be developed by the stretching of the core, and in fine, any injury likely to occur in paying out the cable may be forestalled and remedied. I place in
15 front of the drawing-off drum of the machine, by which the cable is covered with the strengthening material, a second drawing-off drum driven by powerful frictional gearing, so as to go slightly faster than the first drawing-off drum if not checked. Between the two drums I allow the cable to fall in a bight, passing under a loose pulley loaded with the weight calculated to produce the
20 proof strain required on the cable, or any suitable dynamometer may be used. I regulate the speed of the second drawing-off drum by a strap on a double cone, or analogous contrivance. Instead of the weight and loose pulley the required strain may be brought on the cable by putting two drums in front of

Jenkin's Improvements in the Manufacture of Telegraph Cables.

the drawing-off drum. The new drum next the machine is not driven by the machine, but is retarded by a break of suitable form, so as to cause a sensible constant retarding strain to come upon the cable before the foremost drawing drum which is driven from the machinery can pull the second one round; the loose loaded pulley may be used in conjunction with these two drums, or 5 omitted. Or I place a similar arrangement of two drums, one driven by machinery and the other retarded by a break between the ship tanks and the shore tanks. The cable may either pass under a loaded pulley giving the desired strain, or the break alone may be trusted to as giving the measure of that strain. When the drums are placed in this second position, the speed of 10 the drawing drum is regulated by convenience only. After passing this test the cable must be examined for mechanical and electrical defects.

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